

## SOUTHERN FARM NOTES.

TOPICS OF INTEREST TO THE PLANTER, STOCKMAN AND TRUCK GROWER.

### Kerosene Emulsion.

Kerosene emulsion is one of the most useful remedies against insects, especially those that suck the sap from the plants or blood from animals which they attack, and which, therefore, cannot be combated by the use of stomach poisons like Paris green. On the other hand, different plants vary in their ability to withstand the oil, so that care must be used to make the emulsion strong enough to be fatal to the insects without hurting the plants. The chief insect pests for which it is used are the various species of plant lice or aphids and the scale insects. While the San Jose scale can be very successfully combated by spraying in the winter with the lime-sulphur-salt wash, yet this material can only be used when the trees are dormant and kerosene emulsion must still be depended upon for summer treatment.

To be applied to best advantage the emulsion must be applied with a spray pump, for if put on with a sprinkler it wastes the material and endangers the plant, and the application is also not as thorough as when a regular sprayer is used. Spray pumps throw the emulsion in such a fine, foggy mist that it penetrates into nooks, corners and crevices which would not be reached with a sprinkler. The application must also be so thorough as to reach the individual insects, for they are only killed when it comes into actual contact with their bodies.

The directions for preparing the emulsion are as follows:

Shave one-half pound of laundry soap into thin pieces in one gallon of water and bring to boiling heat on stove to dissolve the soap. Then remove the soap water from the fire and pour in two gallons of kerosene and churn the whole together violently until thoroughly mixed. This is best done by pumping it through the pump and back into itself again. This gives three gallons of emulsion, which is sixty-six per cent. oil, but as this is too strong for most uses, it may be diluted by this table:

To get ten per cent. oil add seven-gallons water.

To get fifteen per cent. oil add ten and a half gallons water.

To get twenty per cent. oil add seven gallons water.

To get twenty-five per cent. oil add five gallons water.

To get thirty per cent. oil add four gallons water.

To get forty per cent. oil add two gallons water.

To get fifty per cent. oil add one gallon water.

The emulsion is not a poison and does not kill the insects by being eaten, like Paris green. It is only fatal to those insects that are wetted by the application, so that great thoroughness is needed in making the application, so that every individual will be touched. On the other hand, only enough must be applied to thoroughly wet the insects, and the emulsion must not run down the plant and in at the roots. That is why a regular spray pump is so necessary, in order to make the application so thoroughly as to reach all the insects without an excess, which would hurt the plants.

Some of the more common troublesome insects for which the kerosene emulsion may be used are:

Cotton Louse—Spray with fifteen per cent. emulsion as soon as they appear and before they get scattered throughout the field.

Rose Louse—Spray with fifteen per cent. emulsion when they appear.

Cabbage Louse—Same, before leaves get curled.

Green Apple Louse—Same as cabbage louse.

Woolly Aphis of Apple—Use fifteen per cent., or twenty-five per cent in winter.

Black Aphis of Peach and Plum—Spray with fifteen per cent. before leaves get curled.

Pea Louse, or Aphis—Use emulsion at ten or fifteen per cent., or tobacco dust. We have not yet fully settled this question.

San Jose Scale—Spray with fifteen per cent. emulsion if treatment is to be given while trees are in leaf. But do not treat them in bloom, or until after the fruit is well set after blooming. The best remedy for this pest is to use lime-sulphur-salt wash in winter.

Oyster Shell Scale—Spray with twenty per cent. emulsion when the young begin to crawl (about May 1, in most years).

Scurfy Scale—Same as oyster shell scale.—Franklin Sherman, Jr., Entomologist, North Carolina Department of Agriculture, Raleigh.

### Seasonable Hints.

The cultivation of the corn, tobacco and cotton crops should have close attention so that the crops may be encouraged to make rapid growth. Cultivate shallow and frequently and keep the soil level. When it is not possible

to run the cultivator through the crop without breaking the plants then it is time to cease cultivating, but not until then. Before the last working sow cowpeas (if you have them), crimson clover or sowing clover in the corn and cotton fields and cover with the cultivator. These will make fall and winter grazing and will help the land materially by conserving the fertility not called for by the main crop. At this season of the year nitrification is very active in the soil and the growing of the leguminous crops conserve this nitrogen and adds largely to it.

After the wheat and corn have been cut, if grass or clover are not seeded in them, break them up with a disc harrow or cultivator and sow a mixture of crimson clover, oats, wheat and rye broadcast, say ten pounds of crimson clover and three-quarters of a bushel of the mixed grain. A couple of pounds of rape seed may also be added to the mixture with advantage or hairy vetch may be substituted for the crimson clover. This mixed seeding will make good fall and winter grazing and will be far better for the land than growing a crop of weeds, which only serve to deplete fertility and make work for another year.

Where clover or grass was seeded with the wheat or oats see that the stand is not lost by allowing the weeds to grow up and run to seed after the grain is cut. We have seen many a fine stand of clover and grass lost in a few weeks after harvest by the weeds growing up and taking all the moisture and fertility out of the soil. Run the mower over the fields as soon as the weeds begin to shoot up and repeat the work as needed. The cuttings will mulch the clover and help it.—Southern Planter.

### Build a Silo.

If you have not a silo on the farm now is the time to build one ready to hold the forage crops as they are cut, says the Southern Planter. A silo is the cheapest barn a farmer can build, and enables him to save his crop in the cheapest and easiest way and irrespective of the weather. Here in the South the building of a silo is a simple matter, as no precautions are necessary to exclude frost. All that is needed is to make a tight receptacle for the crop. This may be either in the form of a big tank or tub, or it may be built like a frame building. Tub silos are in use on many farms in the South, and are a perfect success. The great point to be observed is to build with the greatest depth possible, so that the natural weight of the silage will compress the contents solidly and drive out and exclude the air. To arrive at the size of silo required estimate the consumption of silage at forty pounds per head of cattle to be fed per day. Multiply this by the number of days required to be fed, and you have the quantity of pounds for which storage is required. A cubic foot of silage will weigh on the average forty pounds, so that each animal will consume a cubic foot of the feed per day. The silo must be large enough to hold this quantity when settled, and to provide for the settling add one-fourth to the number of cubic feet of silage called for. A round silo is the most economical, as the settling is most perfect, there being no corners to hold the feed and let it spoil.

Estimated size of silo needed, and number of acres required for a given number of cows, for a feeding season of 180 days:

No. of Cows.	Estimated Consumption of Silage, Tons.	Size of Silo Needed, Diam. Ht.	Average Acres Corn Needed.
6	20	8x20	1 to 2
9	30	10x22	2 to 3
13	45	12x25	3 to 4
21	74	13x29	5 to 6
25	90	14x30	6 to 7

### Second Crop of Irish Potatoes.

In the eastern sections of Virginia and North and South Carolina the second crop of Irish potatoes should be planted. This crop is grown from seed raised this spring. The sets should be the medium sized potatoes sorted out when digging the crop, and should be planted whole. These sets should be spread out in a moist, shady place and have a little fine, moist soil spread amongst them, not sufficient to cover them, but just sufficient to pack around them. They will green and commence to put out sprouts. When fairly sprouted they should be set. Open the furrows deep. Apply the fertilizer in the bottom of the furrows and mix with the soil. As they grow work the soil into the furrows and bring to a level surface as the plants grow. Keep level and cultivate frequently. This crop makes the best sets for spring planting, and there is a heavy and constant demand for them. The crop should mature just before frost.

The United States now holds second rank among the world's exporters of boots and shoes.

## ELECTRICITY IN THE LABORATORY

Professor Morse's Furnace and Its Many Advantages.

Harmon V. Morse, professor of analytical chemistry at the Johns Hopkins University and adjunct director of the chemical laboratory, has invented and recently perfected an electric furnace which, it is believed, will revolutionize practical laboratory work in chemistry, says the Baltimore Sun. The ordinary copper oven is encased in a box doubly lined with asbestos, with air space between, the whole covered with aluminum paint, which is not affected by high temperatures, is a very poor heat radiator and preserves the asbestos from shredding. This arrangement practically prevents any loss of heat by radiation.

The source of heat is in the stove, which is placed within the copper oven. The construction of this stove is the ingenious part of the apparatus, and requires the highest type of experimental skill. It is constructed of a number of parallel slabs of soapstone coated with graphite, the soapstone being unaffected by the heat. The graphite must be evenly distributed over the slabs of soapstone, in order that the heat may be developed uniformly over the surface. The oven itself is not so difficult of construction, but the making of the heating apparatus within, through which the electric current is passed, has formed the great stumbling block in the way of former investigators. This electric furnace can be operated at a cost of less than one cent a day. A constant temperature of 150 degrees can be obtained for eight hours at a stretch at a cost of three-fourths of a cent.

### Superstitions For June.

June was the month which the Romans considered the most propitious season of the year for contracting matrimony engagements, especially if the day chosen was that of the full moon; the month of May, on the contrary, being especially to be avoided as under the influence of spirits adverse to happy households.

Hence the June brides. All these pagan superstitions were retained in the Middle Ages, with many others which belonged more particularly to the spirit of Christianity.

The "best man," by the way, used to cut quite an important part in Sweden. In ancient days it was a death the dignity of a Scandinavian warrior to court a woman's favor by gallantry and submission. He waited until she had bestowed her affections on another and was on her way to the marriage ceremony, when, collecting his faithful followers, they fell upon the wedding-cortege and the stronger party won. To favor this practice, marriages were usually performed at night.

A pile of lances is still preserved behind the altar of the ancient church of Hraaby, in Gothland, into which were fitted torches and which were borne before the bridegroom to give light and protection.

It was the province of groomsmen, or "best men" to carry these, and the stoutest and strongest of the bridegroom's friends were chosen for the duty.

### In Texas.

"They do things quickly at El Paso, Texas," said a commercial traveler the other day. "I was on a train near there on my last trip, when the porter in the car was in a scrap and hit a passenger over the head with a poker. The passenger drew a gun and shot the porter six times.

"Well, we took the wounded man off the train at El Paso, but he died before the ambulance arrived, and I was told to be at the inquest at 10 a. m. next day, to testify.

"I got to the place a little late—at 10.10, to be exact—and as I was going in I met the officers coming out.

"I'm here as a witness," I said.

"Too late," they said. "The passenger was acquitted five minutes ago."

—Philadelphia Press.

### Chickens Reared by a Cat.

A remarkable freak of nature is reported from Wadebridge, in Cornwall, where a cat is successfully bringing up a brood of chickens. The cat and chickens are the property of a Mrs. Williams, of Trenant.

It appears that the cat recently had kittens, and in due course the latter were drowned. The cat, while looking for her offspring, found an old hen with a brood of chickens only recently hatched, and decided to take charge of the chickens and bring them up as her own family. The cat at present carefully nurses the chickens by the fireside, and carries them about in her mouth, just as she would her own kittens.—London News.

### The Imperial Eagle.

The imperial eagle, the largest of the species known, flies to a height of from 10,000 to 15,000 feet. It is a native of South America, and its habitat is among the lofty mountains of that country. Its power of flying to high altitudes is only exceeded by the condor of the Andes, which is said to have attained the height of six miles, or within one mile of the greatest height ever attained by a balloon. The eagle sails in the air at heights ranging from three to five miles and when seen to soar upward by an observer on the earth's surface disappears from sight in about three minutes.



### AMERICAN WOMEN.

Sarah Grand says that American women are, for the most part, more thorough, more intelligent, better informed, larger minded and more agreeable to meet than their British sisters. The average Englishwoman is dull, idle, sluggish and incompetent; the average American is busy, bright, energetic and capable.

### LATEST PARISIAN IDEA.

Lace as a trimming for cloth dresses has long been in vogue, but the latest Parisian idea is to insert light cloth costumes with tulle worked in little colored flowers embroidered either in ribbon or silks. A cream cloth dress had near the foot of the skirt a Greek key border of such embroidered tulle, and straight rows of it on the pelviline capes of the short coat.

### BIT OF ADVICE TO WOMEN.

Don't pick out a man for a husband simply because you love him. The most important thing is whether he loves you. A woman who loves her husband better than he does her is a doormat on which he treads. If he loves her better than she does him, he looks up to her as a goddess and spends his life trying to win her favor.

A too adoring wife bore a man with her affection, but no woman ever had enough love given her to satisfy her, and the more affection the man lavishes upon her the stronger the claim he establishes. After marriage a thousand things draw a woman's heart to her husband; a thousand things estrange him from her.—Woman's World.

### GOOD OF EXERCISE.

Woman's innate tendency to overdo anything that interests her and run it into the ground militates against her success in physical culture, according to Mme. de Gollere Davenport, who, while confessing to seventy-four years, is said to look not more than forty-five or fifty. Exercise in moderation is good for every woman, she thinks, fencing, swimming and riding being among the most beneficial forms, when properly followed. Clubwomen and fashionable women are strangely enough the principal detractors of physical culture, she thinks, the ambition of the latter leading them to sacrifice themselves, their husbands and children, their home duties, their own stomachs even, to the inordinate craving for social amusement. On the other hand, fashionable women frequently take it up with great enthusiasm and make excellent pupils.

### TO WHITEN LACES.

Laces and linens which have become yellow with age, or greatly soiled, can be whitened by folding them carefully and placing them in the sun to soak in a strong solution of borax and water. As the water is absorbed or clouded, add fresh water, and if the water becomes quite cloudy from the loosened dirt, pour in a new solution of borax and water. Turn the lace or linen at least once while it is whitening. In the warm weather the yellow is easily removed, though the soaking may continue two or three days and nights without injuring the most delicate fabrics. Care should be taken, however, in removing the lace, when once it is clean. It should be taken out folded, not squeezed, but unfolded carefully on folded towels, pinned out neatly and left in the sun to dry. If the lace sticks to the towel, let it soak off—don't try to pull it away.

### CONVENIENT WORKBAG.

A convenient workbag that can be easily made at home at the cost of a few cents would be something like the following: The size of the bag being decided on—its base should measure at least nine inches square—two pieces of light cardboard should be cut in the shape of an envelope, supposing that its top and bottom flaps were both open. The points might be rounded off a little. Measuring off nine inches in the centre of each piece of cardboard, bend it upon the two lines thus secured. The flap ends will then form sides, when you set the pieces of cardboard one inside the other, crosswise. You then cover them, before fastening together, with any preferred material, figured cambric, denim or cretonne, binding the edges with colored braid. Make a bag some inches deeper than this cardboard case, and provided with a drawing string in the top. Glue this inside the case and the workbag is complete.

### FOR BUSINESS WOMEN.

Business women are forsaking the cloth skirt and thin shirt-waist for the washable shirt-waist suit; and it is only the size of the laundry bill that prohibits others from also doing so. Crash and the heavier linen weaves are not so easily crushed, or so likely

to gather dust as some other materials. Ecru, sage green and the soft blue are colors that do not quickly show soil, and are at the same time cool to the eye.

If you should desire white get the Russian crash that sells for toweling. Get it in its palest shade—a soft cream that is almost pure white, but will stand hard wear.

For very hot weather a white Swiss with black dots would be cool.

Ginghams in black or blue and white checks of all descriptions are an economical investment.

If you must be very, very saving why not try cotton crepe, which needs only washing to make it again presentable. We do not advise this for steady business wear, but for one of those prostrating weeks of hot weather which we must expect now and then.



The summer girl is beginning to sit up and take notice.

The girl whose grandmother has bequeathed her a lace collar or caps is very fortunate just now.

A woman wants her husband to do as he wants to, but she wants him to want just what she wants.

Pretty little Japanese card cases are of a soft Japanese leather upon which are printed designs in color.

Another way to prevent low-grade cats from carrying contagion from the alleys is to clean the alleys.

If you don't care whether you are happy or not, be happy for the sake of others. For cheerfulness is as infectious as the measles.

In Paris parasols this season are rather small and very convex, of geranium or white taffeta material with three rows of lace or embroidery round the edge.

The labor spent on the designs and workmanship of the new ribbons has brought its own reward, for ribbon as a trimming has not played such a part in years as is assigned to it this summer.



Cavalry buff is good with white and gray combinations.

Bands of flowered net furnish a pretty trimming for frocks of plain net.

A big black velvet bow under the chin sets off the beauty of pale gowns.

Taffeta petticoats are supplied with adjustable flounces of white embroidered lawn.

Collarless gowns are most comfortable just now, but they never look well with a hat.

Sequin trimmings, like the poor and the blouse, it seems we are to have always with us.

Pointed bodices with a suggestion of basque in the back are more and more in evidence.

Hats this year run to every extreme of sizes and shape without transgressing the laws of fashion.

Tan ponges is the coolest of all the colors in which that fabric comes, and is besides apparently dust-proof.

Many taffeta cloaks are belted in at the waist, but quite as large a number are left loose from the shoulders.

Kid belts, burned and tinted with exquisite autumn leaf designs, are among the most charming innovations.

Pink-colored silks painted with delicate misty flowers make the most charming evening gowns and dressy wraps.

Sleeves are gathered full into the armhole, and as a rule fall only to the elbow, necessitating long gloves or a deep lace cuff.

Parasols follow the fancy for trimming. Many have tucked bands fastened together and show a hemstitched border of contrasting color.

A pronounced feature is being made of lines of ribbon velvet, interesting embroidered trails of sequins, the ground being net, chiffon and crepe de chine.

The newest sleeves have the upper puff separate from the lining, but shirred and wired to stand out. The lower or under sleeve is sewn in above the elbow.

In the more "dressy" examples of white blouses, one still sees the drooping shoulder effect, but squarer shoulders are really more modish and are safer, as the tendency in all garments is in this direction.